

Notice of Allowability

Application No.

10/789,371

Examiner

Angela M. Lie

Applicant(s)

DITTRICH ET AL.

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment to the non-final rejection dated 10/25/2007.
2. ☒ The allowed claim(s) is/are 8, 10, 11 and 16-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Pedro F. Suárez on December 14, 2007.
3. Claim 8, line 20, after "setting the flag fd to true" add --,wherein a flag fd comprises Boolean values of true or false indicative of whether a value of the function F is defined-- .
4. The Examiner's amendment has been made in order to overcome rejection under 35 U.S.C. 112 second paragraph, in particular lack of antecedents in basis for the phrase "flag fd".

Allowable Subject Matter

5. **Claims 8, 10, 11 and 16-20 are allowed.**
6. The following is an examiner's statement of reasons for allowance:

As to claims 8, 10 and 20, the prior art fails to teach a method for reducing redundancy within a data model in a database, wherein determining whether pairs of partial keys are functionally dependent for each l from 1 to $(d-1)$ and j from $(i+1)$ from d comprises: setting the flag fd to true; for each tuple t in T , determining whether $F(K_{ri})$ is defined, wherein $F(k_{ri})$ is set equal to K_{rj} upon determining that $F(K_{ri})$ is not defined;

looping through the tuples t in T ; and generating a report indicating that column i is functionally dependent on column j if flag fd is true after the looping through the tuples t in T , wherein all the variable such as T , t , fd , $F(Kri)$, Krj are defined in claims 8, 10 and 20.

As to claim 11, this claim is allowed by the virtue of its dependency on claim 10.

As to claim 16, the prior art fails to teach a method of reducing redundancy within a data model in a database, wherein the data model is represented by at least one table, the method comprises the steps as disclosed in claim 16, and in particular wherein when for i from 1 to $(d-1)$ and j from $(i+1)$ to d the function $F(Kri) = Krj$ is not the same function for each tuple $t(r)$ in the table, there exists one or more mappings from Kri to Krj for different values of r ; and wherein different values of r are related to different tuples $t(r)$, and upon determining multiple mappings, checking whether one or more entries in set $\{Krj\}$ are similar to each $t(r)$, wherein all the variables are defined in claim 16.

As to claims 17-19, those claims are allowed by the virtue of their dependency on claim 16.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Inquiry

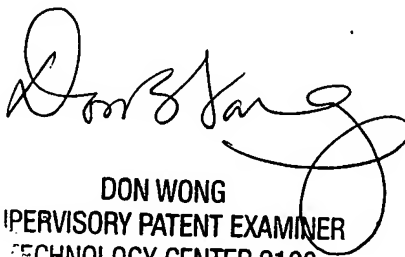
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela M. Lie whose telephone number is 571-272-8445. The examiner can normally be reached on M-F.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Angela M Lie



DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100